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(54) **Dowel hole drilling jig**

(57) A jig for drilling dowel holes in a face or edge of a workpiece comprises an angle plate providing two orthogonal surfaces 1, 2, or a body providing such surfaces. Perpendicular to one surface is a sleeve-lined bore 12 for guiding the drill. A shim 6 is preferably provided for attachment to the surface 2 of the jig to enable a hole to be drilled offset from the centre of the thickness of a workpiece to allow for a "step-in" when fitting a rail to the leg of a chair.

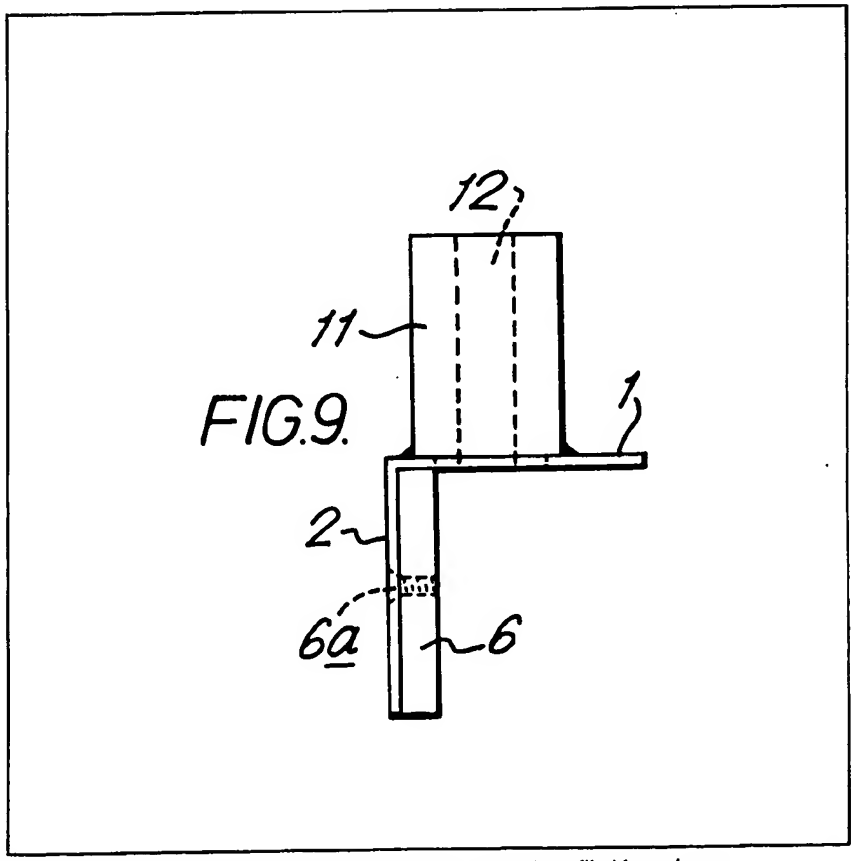

FIG.9.

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The drawing(s) originally filed was/were informal and the print here reproduced is taken from a later filed formal copy.

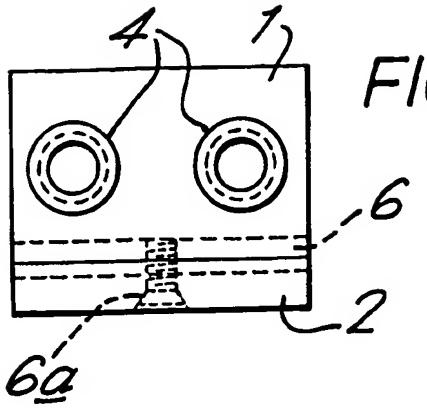


FIG.1.

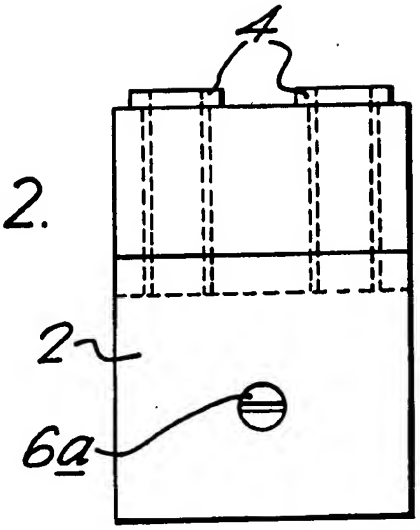


FIG.2.

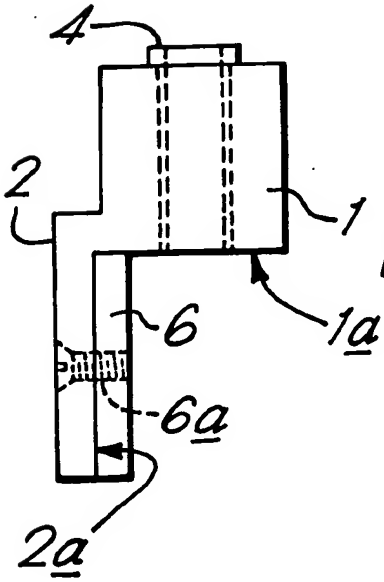


FIG.3.

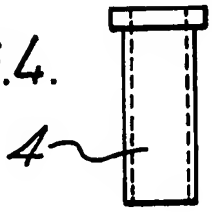


FIG.4.

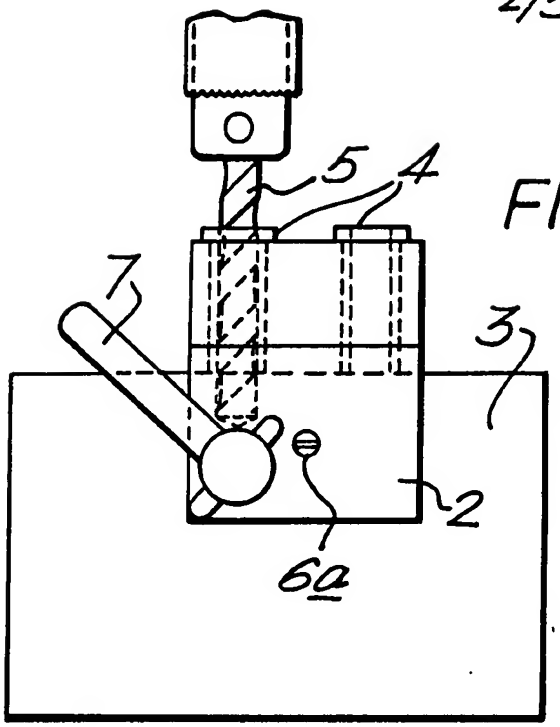


FIG.5.

FIG.6.

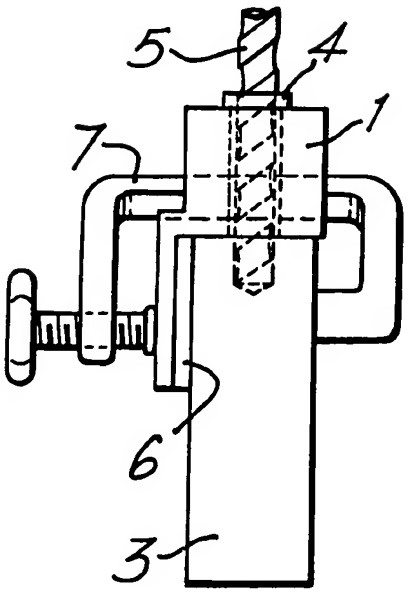
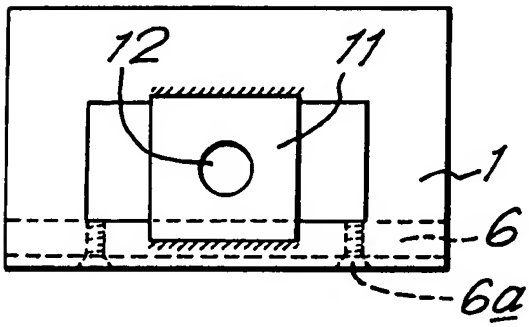


FIG.7.



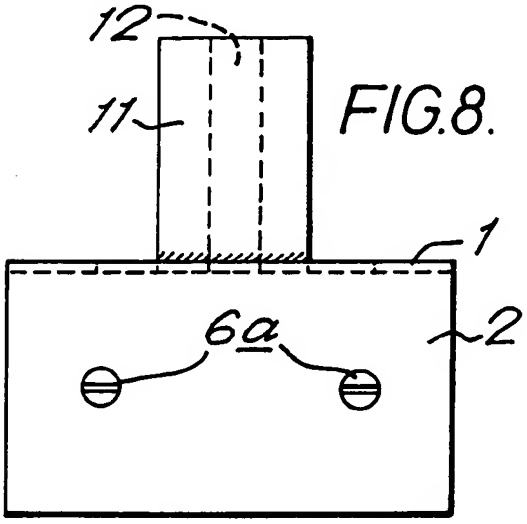
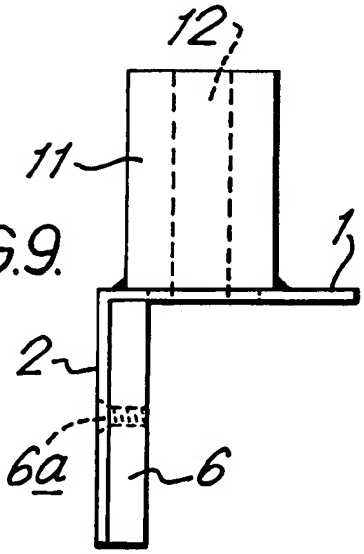


FIG.8.

FIG.9.



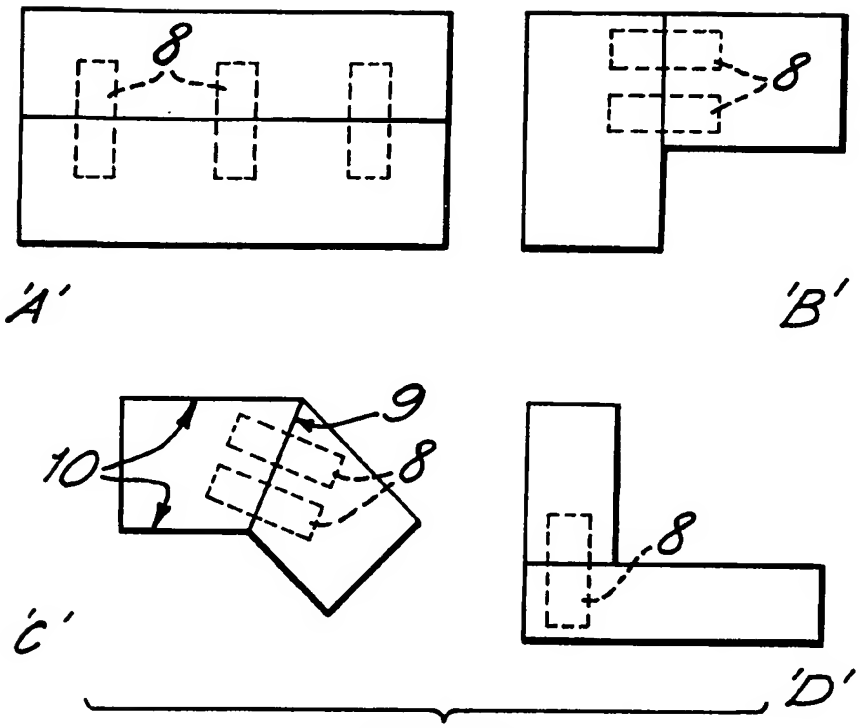


FIG.10.

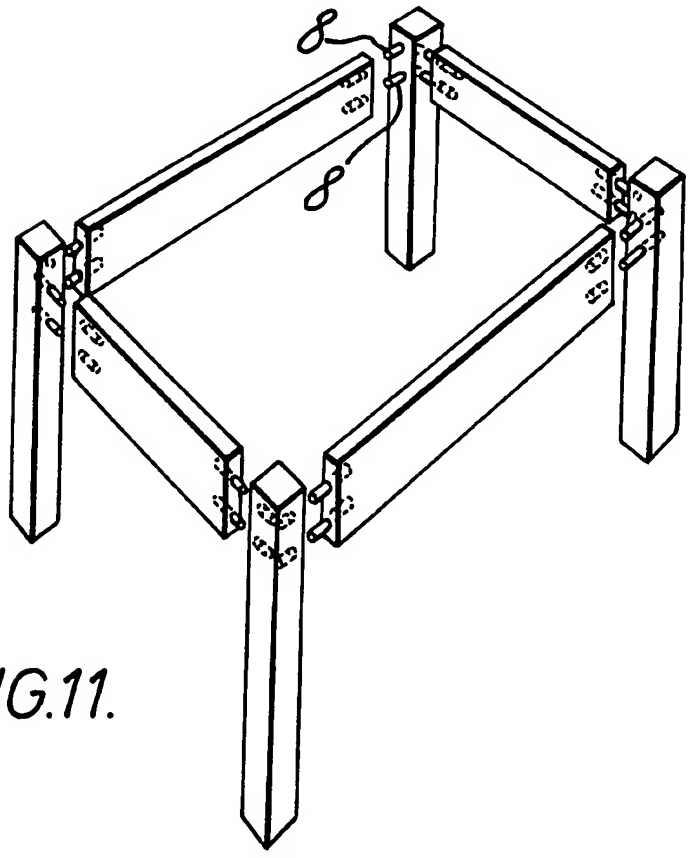


FIG.11.

SPECIFICATION

A jig for drilling holes in workpieces for the reception of dowel pins or pegs

This invention relates to a jig that facilitates drilling of holes in the faces of workpieces that are intended to be abutted together and bridged and connected together by dowel pins or pegs. The object of the invention is to provide a drilling jig that ensures that faces of workpieces to be bridged by dowel pins can be drilled with holes extending at right anlges to said faces (i.e. either side faces or edge faces or both) and so that the holes, when the workpieces are abutted together, are truly co-axial and dowel pins exactly positioned. An added advantage of the invention, as will hereinafter be appreciated, is that the formation of dowel-receiving holes in workpieces can be carried out accurately by workpeople who are not necessarily skilled craftsmen.

According to this invention there is provided a jig for drilling holes in workpieces for the reception of dowel pins that comprises a portion of angle section or shape that can be engaged squarely with a surface, (e.g. a face or edge of a workpiece) and a part extending from said portion having a hole through which can be passed and guided a drill correctly positioned for engagement with said workpiece.

According to a preferred embodiment of the invention the jig includes a shim that can be detachably secured to the work-engaging face of said portion of the jig to enable a hole to be drilled to one side of the centre of the thickness of a workpiece to allow for a "step-in" when fitting a rail to the leg of a chair or the fitting together similar parts of an article.

To enable the invention to be clearly understood embodiments thereof will now be described by way of example with reference to the accompanying diagrammatic drawings, wherein:

Figures 1, 2 and *3* are plan, front and side views respectively of the jig,

Figure 4 is a view of a hardened steel bush fitted to the jig for guiding a drill,

Figures 5 and *6* are front and side views respectively showing the jig engaged with a workpiece,

Figures 7, 8 and *9* are front, plan and side views illustrating how the hig can be prefabricated from separate parts welded together,

Figure 10 is a view illustrating examples of four joints embodying dowel pegs designated "A", "B", "C" and "D" that can be formed with the aid of the jig of this invention, and

Figure 11 is a perspective view showing a framework incorporating joints "B" shown in Figure 10.

Referring firstly to Figures 1 to 4 of said drawings, the jig comprises portions 1 and 2 defining surfaces 1*a* and 2*a* extending at right angles to one another and that are intended to be abutted squarely against surfaces of a workpiece 3 disposed at right angles to one another as shown in Figures 5 and 6 and in one of which surfaces one or more holes for the reception of dowel pins is or are to be drilled.

The portion 1 is formed with one or more holes in which, or each of which is fitted a hardened steel bush 4 constituting a guide for a drill 5.

A shim plate 6, or a number of shim plates 6 of different thicknesses are provided and this shim plate, or the selected one of a required appropriate thickness, when fitted against the inner face 2*a* of the portion 2, e.g. by a screw 6*a*, enables a hole for receiving a dowel peg or pin to be drilled slightly to one side of the centre of the thickness of a workpiece allowing for a "step-in" whe fitting, for example, a rail to the leg of a chair.

As clearly shown by Figures 5 and 6, the jig is clamped to a workpiece 3 (that may be gripped in a vice) in such a way as to enable an electrically or manually operated drill to be guided through a guide bush 4 and so ensure that the axis of the drilled hole is parallel to the two side faces of the workpiece and at right angles to the edge.

The jig may be gripped on to a workpiece in any suitable manner, e.g. by a C-shape clamp 7 of known construction.

Figure 10 illustrates four different uses to which the jig may be put. Joint "A" illustrates two flat pieces of wood, chip board or plywood that are connected together by dowel pins 8 engaged in co-axial holes in said pieces with the use of the jig of this invention.

The joint "B" is one used between, for example, legs and rails of a chair or stool as illustrated by Figure 11 which for clarity shows the parts and the connecting dowels 8 in position prior to actual abutment of the parts together.

The holes for the dowels of this joint "B" are formed with the use of the shim plate 6 to obtain the "step-in" when a rail is fitted to a leg.

Joint "C" is one used on a window sill, such as that of a bow-type window or the like in which abutting end edges 9 the joint are not at right angles to the faces 10.

Lastly, joint "D" is one used where two pieces of wood or other material are joined together by dowels as in the form of a box with the edge of one workpiece abutting a side face of another workpiece at right-angles to one another.

Figures 7, 8 and 9 as previously stated show how the jig of the Invention may be prefabricated from separate parts welded together. Thus the portions 1 and 2 of the jig may be constituted by a piece of angle iron to which is welded a block 11 having a drill-guiding hole 12 therein registering with hole in the angle iron, a shim plate 6 being provided for use when required.

If desired the part 1 or block 11 having a drill-guiding hole may be detachable and replaceable by a part having a different diameter hole, the registering co-axial hole in the part 1 that can be engaged squarely with a workpiece being of a sufficiently large diameter so as to accept a range of drill sizes.

CLAIMS

1. A jig for drilling holes in workpieces for the reception of dowel pins comprising a portion of angle section or shape that can be engaged squarely with a surface, (e.g. a face or edge of a workpiece)

and a part extending from said portion having a hole through which can be passed and guided a drill correctly positioned for engagement with said work-piece.

2. A jig as claimed in Claim 1, including a shim that can be detachably secured to the work-engaging face of said portion of the jig to enable a hole to be drilled to one side of the centre of the thickness of a workpiece to allow for a "step-in" when fitting a rail to the leg of a chair or the fitting together similar parts of an article.

3. A jig for drilling holes in workpieces for the reception of dowel pins constructed substantially as hereinbefore described with reference to and as illustrated by the accompanying drawings.

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